

REMARKS

Claims 1-5 and 10-17 are all the claims pending in the application. Claims 1-5 have been amended and new claims 10-17 have been added.

Claims 1-5 have been amended to recite a "first" and "second" resin for purposes of further clarity. In addition, claim 1 has been amended to more clearly recite the joining step and is supported by page 3, lines 7-11 of the present specification. Support for new claims 10-17 can be found, for example, at page 3, lines 15-30; page 4, lines 3-22; page 4, line 23 to page 5, line 10; and page 5, lines 11-25 of the present specification.

Entry of the above amendments is respectfully requested.

I. Response to Rejection of Claims 1-5 under 35 U.S.C. § 112, second paragraph

Claims 1-5 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner's positions are below.

A. Claim 1 recites the term "the resin" as forming both "the middle portion" and "the edge portions". As such, the claim is indefinite because it cannot be clearly ascertained if the resins at the edges are intended to be the same or different resins.

Applicants respectfully traverse the rejection. To meet the requirements of § 112, second paragraph, the claims must be sufficiently definite for one to reasonably determine their scope. MPEP § 706.03(d). As currently written, the limitations of claim 1 are definite. First, claim 1 recites "a resin for a middle portion" and "a resin for edge portions." Thus, claim 1 recites two separate resins - one resin for a middle portion and another resin for the edge

portions. Second, based on the specification, which refers to two separate resins being used for the middle portion and for the edge portions, one of ordinary skill in the art would understand that claim 1 recites the use of two resins. Further, the Examples of the present specification use different resins for the middle portion and the edge portions. Therefore, it is respectfully submitted that one skilled in the art would be apprised of the scope of the invention, and that claim 1 complies with §112, second paragraph.

However, to advance prosecution, claims 1-5 have been amended to recite a "first" resin a middle portion and a "second" resin for edge portions for purposes of further clarity.

B. Claim 2 is indefinite because it cannot be clearly ascertained how the middle and edge portions are adjusted according to a MFR difference when (1) the resin appears to be same for each portion and/or (2) no limitation is recited indicating an MFR difference is present. In addition, the breadth of the term "adjusted" is extremely broad and the metes and bounds of the adjustment cannot be adequately determined.

Applicants respectfully traverse the rejection. As currently written, the limitations of claim 2 are believed to be definite. First, the resin for the middle portion and the resin for the edge portions are different, as discussed above. Second, the specification discloses that when there is a larger difference in MFR, then the degree of enclosing is required to be higher, and when the difference is small, a lower degree of enclosing is sufficient. See page 3, lines 15-30. Thus, one of ordinary skill in the art would understand the meaning of the term "adjusted" and would be apprised of the scope of the invention. Accordingly, claim 2 complies with §112, second paragraph.

In addition, new claims 10-11 reciting a difference in MFR between the first resin and the second resin have been added.

C. Claim 3 is indefinite because it cannot be clearly ascertained how the middle and edge portions are adjusted according to a extrusion rate difference when (1) the resin appears to be same for each portion and/or (2) no limitation is recited indicating an extrusion rate difference is present. In addition, the breadth of the term "adjusted" is extremely broad and the metes and bounds of the adjustment cannot be adequately determined.

Applicants respectfully traverse the rejection. The specification discloses that the degree of enclosing is increased with the increase in difference in extrusion rate, and that the degree of enclosing is lowered when the difference in extrusion rate is small. See page 4, lines 3-22. Thus, one of skilled in the art would understand the meaning of "adjusted" and would be apprised of the scope of the invention. Accordingly, claim 3 complies with §112, second paragraph.

In addition, new claims 12-13 reciting a difference in extrusion rate between the first resin and the second resin have been added.

D. Claim 4 is indefinite because it cannot be clearly ascertained how the middle and edge portions are adjusted according to a temperature difference when (1) the resin appears to be same for each portion and/or (2) no limitation is recited indicating an temperature difference is present. In addition, the breadth of the term "adjusted" is extremely broad and the metes and bounds of the adjustment cannot be adequately determined.

Applicants respectfully traverse the rejection. The specification discloses that the degree

of enclosing is increased with the difference in temperature is large, and that the degree of enclosing is lowered when the difference in temperature is small. *See* page 4, line 23 to page 5, line 10. Thus, one skilled in the art would understand the meaning of "adjusted" and would be apprised of the scope of the invention. Accordingly, claim 4 complies with §112, second paragraph.

In addition, new claims 14-15 reciting a difference in temperature between the first resin and the second resin have been added.

E. Claim 5 is indefinite because it cannot be clearly ascertained how the middle and edge portions are adjusted according to a film width when the resin appears to be same for each portion. In addition, the breadth of the term "adjusted" is extremely broad and the metes and bounds of the adjustment cannot be adequately determined.

Applicants traverse the rejection. The specification discloses that the degree of enclosing is increased with an increase in width of the resin film, and that the degree of enclosing is lowered when the width of the resin film is small. *See* page 5, lines 11-25. Thus, one skilled in the art would understand the meaning of "adjusted" and would be apprised of the scope of the invention. Accordingly, claim 5 complies with §112, second paragraph.

In addition, new claims 16-17 reciting a difference in width of the resin film between the first resin and the second resin have been added.

In view of the above, withdrawal of the §112 rejection is respectfully requested.

II. Response to Rejection of Claim 1 under 35 U.S.C. § 102(b)

Claim 1 is rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Thompson

(US Pat. 4,348,346).

Applicants respectfully traverse the rejection.

The present invention according to claim 1 is a method of forming a resin film from a first resin for a middle portion to form a resin film main body of the resin film and a second resin for edge portions to form both side edge portions in a crosswise direction of the resin film. The method comprising the steps of: joining the first resin and the second resin in such a manner as to enclose both side edges in the crosswise direction of the first resin for the middle portion with the second resin for the edge portions and to form a boundary of the first resin and the second resin; and extruding the joined resins through an extruding die to form the resin film.

Specifically, the side edges of the resin film main body are enclosed with the resin for the edge portions in a crosswise direction. The joining method reduces the disorder at the boundary between the resins for the middle portion and for the edge portions, while preventing film separation of the two resins. *See page 3, lines 7-11 of the specification.*

Thompson discloses a process of forming a film having a middle portion and edge portions using different types of resins. Specifically, Thompson discloses, at col. 4, lines 41-58 (underlining added), that:

Two extruders 12 and 14 are shown which plasticize the polyester and the polymer overlapped with it and then feed these polymers to a film-forming die 16 via lines 18 and 20, respectively. The polyester material is fed into the die 16 at inlet 22 and is then spread out and flattened as it approaches elongated die opening 24 from which it is extruded as a film. The second, polymer is fed into the die 16 at inlets 26 and 28 near the edge of the stream of melted and plasticized polyester as it is being flattened to form a film. The second polymer is fed to the edge portions of the polyester stream sufficiently upstream of the die opening 24 to permit commingling and intimate physical mixing of the two polymers. In the exemplary case of polyethylene as the second

polymer, a milky-white mixture is formed on the two materials. This is shown generally in the drawings as edge 30. This can also be seen in the cross-sectional view of FIG. 2.

Thus, Thompson discloses that the two resins are mixed to permit intimate physical mixing of the two resins. This is also taught by the disclosure of Thompson that "a milky-white mixture formed on the two materials" and "[t]his is shown generally in the drawings as edge 30. This can also be seen in the cross sectional view of Fig. 2". Since Thompson discloses that the first and second resins are mixed, there is no boundary between the first and second resins.

Hence, Thompson does not anticipate claim 1, which recites "joining the first resin and the second resin in such a manner as to enclose both side edges in the crosswise direction of the first resin for the middle portion with the second resin for the edge portions and to form a boundary of the first resin and the second resin".

In addition, a "problem to be solved" of the present invention is that inclusion of the first resin in the trimmed-off selvages is avoided as much as possible, thereby recycling of the trimmed-off selvages of the second resin can be achieved". This objective could not be achieved if both the side edges of the first resin and the second resin are mixed.

For the above reasons, withdrawal of the rejection is respectfully requested.

III. Response to Rejection of Claims 2-5 under 35 U.S.C. § 103(a)

Claims 2-5 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Thompson (US Pat. 4,348,346) in view of Kegasawa et al. (US Pat. 6,203,742).

Applicants respectfully traverse the rejection.

Each of claims 2-5 depend from claim 1, and thus, it is respectfully submitted that claims 2-5 are patentable for at least the same reasons as claim 1. In addition, Kegasawa does not make up for the deficiencies of Thompson.

Accordingly, withdrawal of the rejection is respectfully requested.

IV. Response to Nonstatutory Double Patenting Rejection of Claims 1-5

Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,896,832.

In addition, claims 2-5 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 of U.S. Patent No. 6,896,832 in view of Kegasawa et al. (US Pat. 6,203,742).

Applicants respectfully traverse the rejection.

Claims 1 and 3 of U.S. Patent No. 6,896,832 recite that each path flow of the second resin is "enveloped by said first resin" and "wherein said second resin joins said first resin so that said second resin is enveloped by said first resin." The specification discloses that Fig. 3(b) corresponds to the case where the second resin is "enveloped" in the first resin (i.e., the second resin forms islands in a width direction of the first resin). See Fig. 3(b) and col. 5, lines 36-53. Therefore, claims 1 and 3 of U.S. Patent No. 6,896,832 do not recite that the side edges of the first resin for the middle portion are enclosed with the second resin for the edge portions.

Accordingly, claims 1-5 of the present application are not obvious in view of claims 1-3 of U.S. Patent No. 6,896,832, and withdrawal of the rejection is respectfully requested.

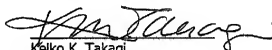
IV. Conclusion

In view of the above, reconsideration and allowance of claims 1-5 and 10-17 is respectfully requested.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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